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Metric Notes 2

Earth Science

Length

The basic unit of measure is the _____.

The instrument used to measure length is the _____ or _____.

1 meter = _____ cm

The _____ is used to measure large distances (like when traveling)

_____ meters = 1 km

Mass : the amount of matter in an object

The basic measure of mass is the _____.

The instrument used to measure mass is the _____.

1000 grams = 1 _____.

The mass of an object stays the same.

Weight:

The weight of an object is the measure of the force of gravity acting on the object.

The basic unit of measure for weight is the _____.

Gravity on earth is _____ m/s

The weight of an object changes as gravity changes on other planets.

Temperature

The basic unit of temperature is degrees _____.

Water freezes at _____ C and boils at _____ C.

Here is a short metric poem:

30 is hot.
20 is nice.
10 wear a jacket
0 is ice.

Volume

The basic unit for liquid volume is the _____.

The volume of a solid can be measured in _____ or _____.

The instrument used to measure the volume of a liquid is _____.

Volume of a rectangular solid or block can be calculated the formula _____

1 L = 1000 _____.

The relationship between milliliters and cubic centimeters is:

1 milliliter = 1 cubic centimeter

Density

Density is the mass per unit volume or mass divided by volume.

Measuring Length

Measure in centimeters.

Length of book	Tile length
Table Height	Table Length

Write rules about measuring.

- 1.
- 2.
- 3.
- 4.

Measure in centimeters.

Width of book	Width of table
Height of doorway	Length of 12 blocks of tile

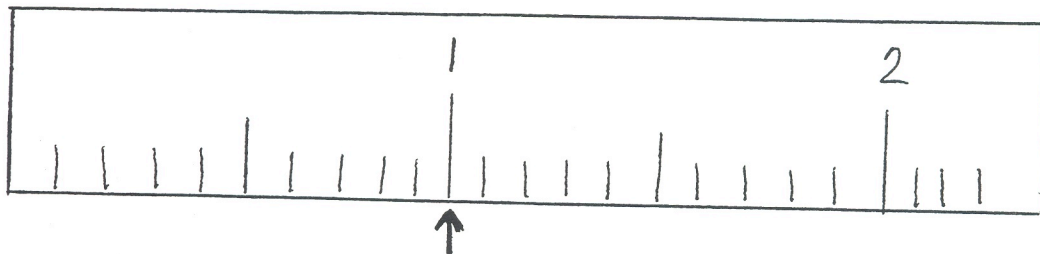
Name _____
Day/Period _____

Linear Metric Measurement

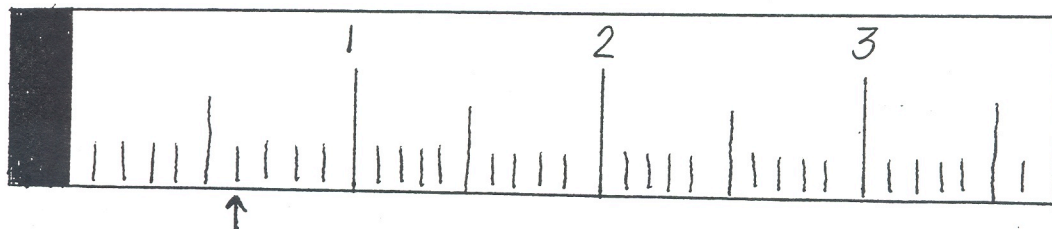
Answer

Record to hundredths place.

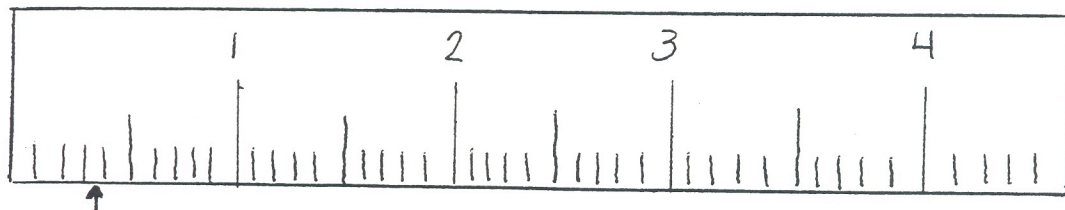
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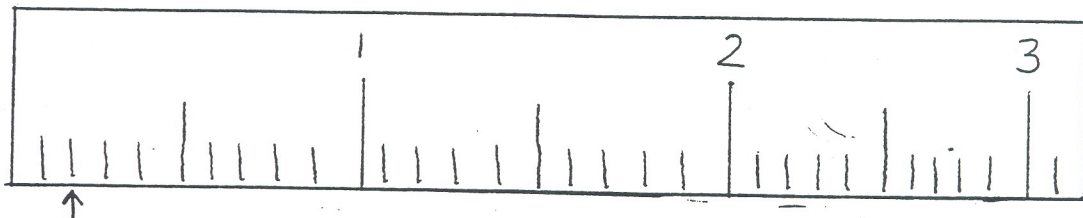
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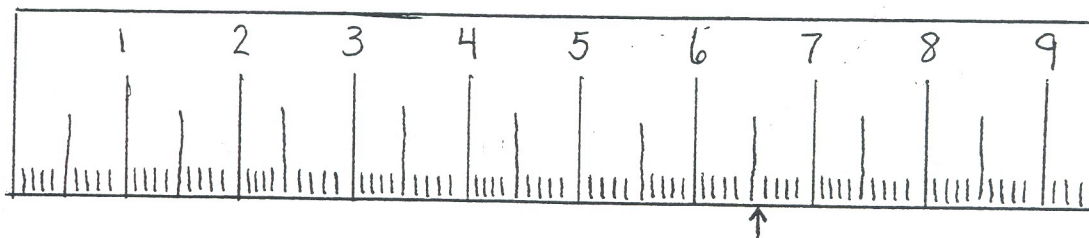
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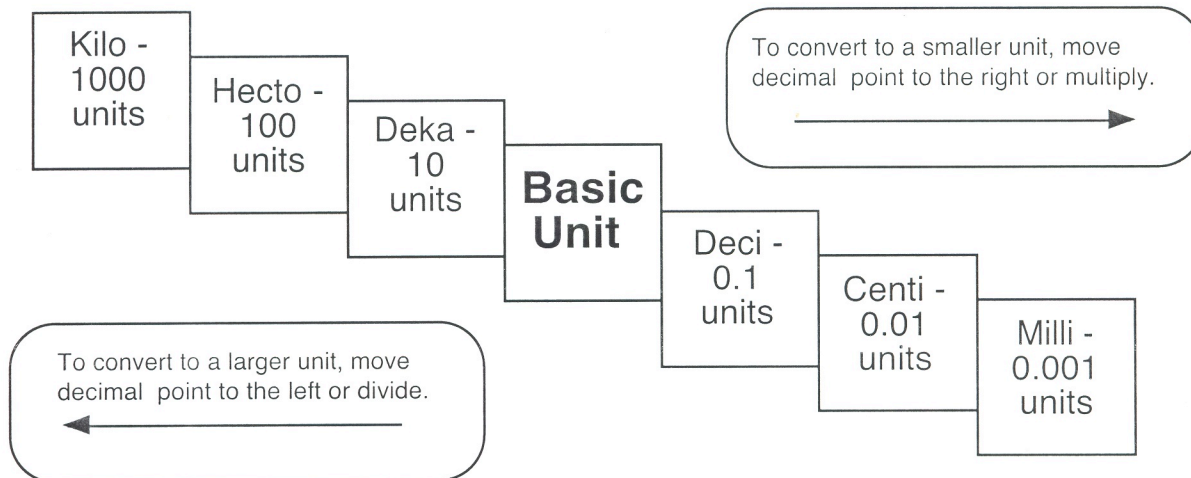


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Metric Mania Conversion Practice

Overhead Copy



Try these conversions, using the ladder method.

$$1000 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$$

$$1 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$$

$$160 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$$

$$14 \text{ km} = \underline{\hspace{2cm}} \text{ m}$$

$$109 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$$

$$250 \text{ m} = \underline{\hspace{2cm}} \text{ km}$$

Compare using $<$, $>$, or $=$.

$$56 \text{ cm} \bigcirc 6 \text{ m}$$

$$7 \text{ g} \bigcirc 698 \text{ mg}$$

Conversion Challenge

Write the correct abbreviation for each metric unit.

1) Kilogram _____

4) Milliliter _____

7) Kilometer _____

2) Meter _____

5) Millimeter _____

8) Centimeter _____

3) Gram _____

6) Liter _____

9) Milligram _____

Try these conversions, using the ladder method.

1) 2000 mg = _____ g

6) 5 L = _____ mL

11) 16 cm = _____ mm

2) 104 km = _____ m

7) 198 g = _____ kg

12) 2500 m = _____ km

3) 480 cm = _____ m

8) 75 mL = _____ L

13) 65 g = _____ mg

4) 5.6 kg = _____ g

9) 50 cm = _____ m

14) 6.3 cm = _____ mm

5) 8 mm = _____ cm

10) 5.6 m = _____ cm

15) 120 mg = _____ g

Compare using <, >, or =.

16) 63 cm ○ 6 m

17) 5 g ○ 508 mg

18) 1,500 mL ○ 1.5 L

19) 536 cm ○ 53.6 dm

20) 43 mg ○ 5 g

21) 3.6 m ○ 36 cm

Name: _____

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Metric Measurements

King	Henry	died	unexpectedly	drinking	chocolate	milk
km	*	*	m	*	cm	mm
kL	*	*	L	*	*	mL
kg	*	*	g	*	*	mg

Millimeter and Centimeter

The centimeter (cm) is used to measure lengths shorter than a meter. A centimeter is about the width of the little finger. A millimeter (mm) is used to measure very short lengths. A millimeter is about the thickness of ten pages of your science textbook.

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

Meter and Kilometer

The meter (m) is a unit of length in the metric system. A classroom doorway is about 1 meter wide. A kilometer (km) is a unit that measures longer distances.

1,000 meters (m) = 1 kilometer (km)

Choose kilometer (km), meter (m), centimeter (cm), or millimeter (mm) as the most reasonable measure.

- The length of a pencil. _____
- The length of the white board. _____
- The width of a table. _____
- The length of a car. _____
- The distance from Allentown to Philadelphia. _____
- The width of the Lehigh River. _____

Complete the following:

- _____ cm = 1m
- _____ mm = 1cm
- 30mm = _____ cm
- 70mm = _____ cm
- 6cm = _____ mm
- 50cm = _____ mm
- _____ cm = 700mm
- 1m = _____ mm
- 2,000mm = _____ m
- 10km = _____ m
- 15km = _____ m
- 45,000m = _____ km

Keep going, you're on a roll:

- 1m = _____ cm
- 1m = _____ mm
- 6.5m = _____ cm
- 12cm = _____ mm
- 3.2km = _____ m
- 10km = _____ m
- 0.142cm = _____ mm
- 42mm = _____ cm
- 617cm = _____ m
- 3,275m = _____ km
- 0.32mm = _____ m
- 0.457cm = _____ m

Metric Measurements

Milliliter and Liter

The liter is a unit of capacity in the metric system. A carton of milk holds about 1 liter.

There are 1,000 milliliters (mL) in every liter (L).

Gram and Kilogram

The gram is a unit of mass in the metric system. A few grains of salt is about 30 milligrams (mg). A thumbtack has a mass of about 1 gram (g). Six potatoes could have a mass of about 1 kilogram (kg).

Choose milliliter(mL), liter (L), gram (g), or kilogram (kg) as the most reasonable measure.

- | | |
|----------------------------------|---------------------------|
| 1. A glass of fruit juice. _____ | 5. A soccer player. _____ |
| 2. Water in a fish tank. _____ | 6. A banana. _____ |
| 3. Spoon full of medicine. _____ | 7. A computer. _____ |
| 4. Barrel of oil. _____ | 8. A postcard. _____ |

Complete the following conversions:

- | | | |
|-----------------------|-----------------------|----------------------|
| 9. 6L = _____ mL | 16. 75mL = _____ L | 23. 7.5kg = _____ g |
| 10. 4,000mL = _____ L | 17. 1g = _____ mg | 24. 2000mg = _____ g |
| 11. _____ mL = 10L | 18. 1kg = _____ g | 25. 5.6kg = _____ g |
| 12. 8L = _____ mL | 19. 8,000g = _____ kg | 26. 198g = _____ kg |
| 13. 7,500mL = _____ L | 20. 10g = _____ mg | 27. 65g = _____ mg |
| 14. 3.5L = _____ mL | 21. 5,000g = _____ kg | 28. 120mg = _____ g |
| 15. 5L = _____ mL | 22. 1kg = _____ mg | |